

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A device for wavefront measurement of an optical imaging system by means of a phase-shifting interferometry technique, the device comprising:

a mask structure ~~(6) to be~~ which is arranged on ~~the~~ an object side, and

a grating structure ~~(7) to be~~ which is arranged on ~~the~~ an image side,

wherein

the mask structure ~~(6) to be~~ which is arranged on the object side comprises one or more one-dimensional mask structure patterns ~~(6a to 6e)~~, and the grating structure to be arranged on the image side comprises one or more two-dimensional grating structure patterns ~~(7a, 7b)~~, or

wherein the mask structure comprises one or more two-dimensional mask structure patterns, and the grating structure comprises one or more one-dimensional grating structure patterns.

2. (currently amended): A method for wavefront measurement of an optical imaging system by means of a phase-shifting interferometry technique, the method comprising:

at least one of:

moving a phase-shifting structure (7) and a detector element (2) laterally relative to the optical imaging system (1) to be measured, and
moving an object-side mask structure (6) laterally relative to the detector element (2),

wherein

a pupil image offset occurring owing to the relative lateral movement is taken into account by back calculating the interferograms, wherein the interferograms are respectively recorded by the detector element, ~~in a way correcting the pupil position,~~ using a phase-shifting characteristic associated with the lateral movement, or

wherein the pupil image offset is taken into account by a computational correction of wavefront derivatives, obtained from the recorded interferograms, in the direction of lateral movement.

3. (currently amended): The method according to Claim 2, wherein the computational correction of wavefront derivatives in the direction of lateral movement is performed using the relationship:

$$I^{(2)}(n) = \cos(S_x^{(1)} - \frac{\partial S_x^{(1)}}{\partial x} \frac{\Delta x(n-1)}{N} + \frac{2\pi(n-1)}{N}) \quad ,$$

which specifies the intensity values $I^{(2)}$ of individual detector element pixels as a function of the nth lateral phase shift with $S_x^{(1)}$ as errored wavefront derivative in the phase-shifting

direction, from which an error-corrected wavefront derivative ($S_x^{(2)}$) is then calculated, wherein
 N denotes a total number of phase steps.

4. (original): The method according to Claim 2, carried out with aid of a device according to Claim 1.

5. (original): The method according to Claim 3, carried out with aid of a device according to Claim 1.